

Readmissions in Belgian acute-care hospitals: burden of disease and potential cost savings.

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Presenting author's short biography

Jeroen Trybou is research assistant at the Health Care Management Center Ghent and the Interuniversity Centre of Health Economics (Ugent-VUB). His PhD research focuses on the hospital-physician relationship. He acts as strategic and financial advisor for several Health Care organizations. He is guest lecturer in the domain of Health Care Management & Policy at the HUBrussel and acts as board member of de 'Vereniging voor GezondheidsEconomie'. His key research interests include organizational and financial aspects of Health Care delivery, a domain in which he published several peer-reviewed articles.

Context

Internationally, hospital readmissions have a great appeal as an indicator of hospital quality. Since possibilities in prevention and control exist, reducing rates of hospital readmission has attracted attention of policymakers as a way to improve quality of care while simultaneously reducing costs. Therefore reducing the number of readmissions is considered to be a pillar of more cost-effective hospital care. The goal of this study was to estimate the cost of hospital readmissions at a national level, describe differences in readmission rates between hospitals and to calculate the potential monetary savings of reducing excess readmissions.

Methods

Stays data were obtained from the Minimum Basic Data Set 2008 in a sample of 45 Belgian hospitals representing 16,141 beds. Readmissions were identified as a second admission for the same patient with the same APR-DRG code within respectively 1 month or 3 months after discharge. Hospital type, diagnosis-related group, age and gender were used as matching factors in comparing readmission rates. Readmissions that occur naturally in each other's proximity due to the repeating nature of therapy were excluded. The costs per readmission were then calculated by linking the stays data with the cost data per APR-DRG and per severity index using the 2008 national feedback. The results of our sample were then extrapolated to all Belgian hospitals. We performed a sensitivity analysis to estimated potential monetary savings when a reduction in the incidence of readmissions in hospitals having a higher readmission rate in comparison to other hospitals is realized.

Results

In our sample 1.5% readmissions (N= 19,454) within 1 month after discharge and 2.1% (N=27,051) within 3 months after discharge were identified. The Readmission rate within one month varied between 0.82% and 5.55% (Md= 1.38%, SD= 0.74%), after three months the readmission rate varied from 1.17% up to 6.40% (Md= 1.97%, SD= 0.80%).

The additional weighted mean cost of these readmissions was € 3,495.58 within 1 month and € 3,572.20 within 3 months. The total financial burden, as extrapolated to the Belgian setting, is estimated at € 280,091,471 (3 months).

We provide a full overview of the potential monetary savings when reductions in readmission rates are realized by applying different thresholds. For instance, if all Belgian hospitals having

a higher readmission rate improve their rate to the level of the hospital corresponding to percentile 75 (or 65) savings would amount to € 14,118,509 (or € 18.752.623).

Discussion

By reducing readmission rates, quality of care can be increased while at the same time lowering delivery costs. This theme is an international leading topic of practice and policy reform.

Unplanned, early or preventable readmissions can be seen as a system failure. There is a growing body of evidence that targeted interventions initiated before and shortly after discharge can decrease the likelihood of readmissions. As such, these interventions are an opportunity to improve quality of hospital care while simultaneously reducing the cost of care delivery. The shortening of Length of Stay has been frequently regarded as discharging patients ‘quicker but sicker’, stressing the importance of follow-up after discharge. The current fragmentary financing system divides the trajectory of patients in different virtual stages and throughout a single course of treatment separate payments are made to providers. This contrasts the idea of ‘care programs’ and the expected integrated care delivery by patients.